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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/578,195

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Thomas Tiller

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EXAMINER

MARTIN, LAURA E

ART UNIT

PAPER NUMBER

2853

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/578,195	<b>Applicant(s)</b> TILLER ET AL.	
	<b>Examiner</b> LAURA E. MARTIN	<b>Art Unit</b> 2853	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 24 January 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 17-25,27-33,35 and 36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 17-25,27-33,35 and 36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

Claims 17, 20-23, 28, 35, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Hall-Goule et al. (WO 03/072664 and US 2005/0119386 A1).

*WO 03/072664 is the official document used to reject the above claims; however, the document's translation is without line numbers, thus US 2005/0119386 is used to simplify the citations for the applicant.*

#### **Hall-Goule et al. disclose the following claim limitations:**

As per claim 17: a method of use of at least one hydrocarbon compound having a carbon chain of two to six carbon atoms carrying two or three hydroxyl groups in an inkjet printing ink composition as a non-particulate matting compound [0042] - [0047] (glycerol), said method comprising the step of incorporating a sufficient amount of said matting compound into said printing ink composition such that the gloss of a marking printed with said printing ink composition is adapted to the gloss of a substrate carrying said marking so that said marking is not discernible by an unaided eye [0006], wherein said inkjet printing ink composition comprises at least one solvent [0042] - [0047] (ethyl acetate, acetone) and at least one binder selected from the group consisting of vinyl chloride- and vinyl acetate copolymers, nitrocellulose, and polyvinyl butyral [0050].

As per claim 20: said matting compound is selected from the group consisting of 1,5-pentane diol, ethylenediol, butanediol, propanediol, glycerol and mixtures thereof [0042] – [0047].

As per claim 21: said inkjet printing ink composition further comprises at least one marking compound absorbing light outside the visible wavelength range [0006] and [0068] (fluorescent colorant).

As per claim 22: said solvent is selected from the group consisting of ketones, acetate esters, alcohols and mixtures thereof [0042] – [0047].

As per claim 23: said solvent is selected from the group consisting of acetone, methyl ethyl ketone, ethyl acetate, methyl acetate, methanol, isopropanol, isopropyl acetate, ethanol, propanol and mixtures thereof [0042] – [0047].

As per claim 28: said inkjet printing ink composition further comprises at least one conductivity salt, a humectant, and/or a stabilizer [0058].

As per claim 35: a method of applying an invisible security marking to a substrate, comprising the steps of: providing an inkjet printing ink comprising a sufficient amount of at least one non-particulate matting compound, at least one water-free solvent [0042] – [0047] and at least one binder selected from the group consisting of vinyl chloride- and vinyl acetate copolymers, nitrocellulose, and polyvinyl butyral [0050]; and printing with said ink a security marking on a substrate, wherein the gloss of the printed security marking is adapted to the gloss of said substrate so that said marking is not discernible by an unaided eye [0006], wherein said at least one non-particulate matting compound is a hydrocarbon compound having a linear or branched carbon

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chain of two to six carbon atoms carrying two or three hydroxyl groups [0042] - [0047] (glycerol).

As per claim 36: an inkjet printing ink composition comprising at least one solvent [0042] – [0046], at least one binder selected from the group consisting of vinyl chloride- and vinyl acetate copolymers, nitrocellulose, and polyvinyl butyral [0050], and at least one marking compound, said marking compound absorbing light of a non-visible wavelength [0006], and optionally additives, wherein said ink further comprises a sufficient amount of a non-particulate matting compound selected from the group of hydrocarbon compounds having a linear or branched carbon chain of two to six carbon atoms carrying two or three hydroxyl groups, such that the gloss of a marking printed with said printing ink composition is adapted to the gloss of a substrate carrying said marking so that said marking is not discernible by an unaided eye [0042] – [0047].

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 18, 19, 25, and 32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall-Goule et al. (WO 03/072664 and US 2005/0119386 A1) in view of Houle (US 6513921 B1).

**Hall-Goule et al. disclose the following claim limitations:**

The method of claim 1.

**Hall-Goule et al. do not disclose the following claim limitations:**

As per claim 18: said matting compound is incorporated into said composition in an amount ranging from 0.5 to 10 weight% of the overall composition.

As per claim 19: said matting compound is incorporated into said composition in an amount ranging from 1.0 to 8.0 weight% of the overall composition.

As per claim 25: the amount of said solvent ranges from 70 to 90% of the overall ink composition.

As per claim 32: said marking compound is incorporated in said composition in an amount ranging from 0.0001 to 10 weight% of the overall ink composition.

**Houle discloses the following claim limitations:**

As per claim 18: said matting compound is incorporated into said composition in an amount ranging from 0.5 to 10 weight% of the overall composition (example 1 - column 22, lines 15-30).

As per claim 19: said matting compound is incorporated into said composition in an amount ranging from 1.0 to 8.0 weight% of the overall composition (example 1 - column 22, lines 15-30).

As per claim 25: the amount of said solvent ranges from 70 to 90% of the overall ink composition (example 1 - column 22, lines 15-30 – water is the solvent).

As per claim 32: said marking compound is incorporated in said composition in an amount ranging from 0.0001 to 10 weight% of the overall ink composition (example 1 - column 22, lines 15-30).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Hall-Goule et al. with the disclosure of Houle in order to create an invisible ink that is highly sensitive to UV and infrared light.

Claims 24, 27, 29-31, and 33 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hall-Goule et al. (WO 03/072664 and US 2005/0119386 A1) in view of Siddiqui (US 5939468 A).

**Hall-Goule et al. disclose the following claim limitations:**

The method of claim 1.

**Hall-Goule et al. do not disclose the following claim limitations:**

As per claim 24: the amount of solvent ranges from 40 to 95 weight% of the overall ink composition.

As per claim 27: said binder is incorporated in said composition in an amount ranging from 3 to 30 weight% of the overall ink composition.

As per claim 29: said conductivity salt is selected from the group consisting of lithium nitrate, alkyl ammonium acetate, potassium acetate, and mixtures thereof.

As per claim 30: the conductivity salt is included in the composition in an amount ranging from 0.3 to 5 weight% of the overall ink composition.

As per claim 31: the conductivity salt is included in said composition in an amount ranging between 0.5 and 3 weight% of the overall ink composition.

As per claim 33: said marking compound is incorporated in said composition in an amount ranging from 0.01 to 2 weight% of the overall ink composition.

**Siddiqui discloses the following claim limitations:**

As per claim 24: the amount of solvent ranges from 40 to 95 weight% of the overall ink composition (example 1 – column 12, line 55 – column 13, line 16).

As per claim 27: said binder is incorporated in said composition in an amount ranging from 3 to 30 weight% of the overall ink composition (example 1 – column 12, line 55 – column 13, line 16).

As per claim 29: said conductivity salt is selected from the group consisting of lithium nitrate, alkyl ammonium acetate, potassium acetate, and mixtures thereof (example 1 – column 12, line 55 – column 13, line 16).

As per claim 30: the conductivity salt is included in the composition in an amount ranging from 0.3 to 5 weight% of the overall ink composition (example 1 – column 12, line 55 – column 13, line 16).

As per claim 31: the conductivity salt is included in said composition in an amount ranging between 0.5 and 3 weight% of the overall ink composition (example 1 – column 12, line 55 – column 13, line 16).

As per claim 33: said marking compound is incorporated in said composition in an amount ranging from 0.01 to 2 weight% of the overall ink composition (example 1 – column 12, line 55 – column 13, line 16).

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method taught by Hall-Goule et al. with the disclosure of Siddiqui in order to provide an invisible ink with better reaction to UV light.



***Response to Arguments***

Applicant's arguments with respect to claims 17-25, 27-33, 35, and 36 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAURA E. MARTIN whose telephone number is (571)272-2160. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen D. Meier can be reached on (571) 272-2149. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/L. E. M./

Laura E. Martin

/Manish S. Shah/  
Primary Examiner, Art Unit 2853